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## Alex Walsh

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<https://alexwalsh123.github.io/Portfolio-Website/>

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Highly motivated second year MSci physics student studying at the University of Bristol. Keen interest in space technology and rocketry with engineering systems experience along with practical laboratory experience and scientific report writing skills. In depth understanding of software systems with practical experience across a variety of coding languages. Excellent team and leadership skills acquired during previous work experience, involving working within a variety of groups and supervising projects and employee training.

### Education

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#### **MSci Physics, The University of Bristol**

**Sep 2020 - Present**

- Working at a first-class level, receiving a first-class in first year and on track for similar in second year onwards.

#### **A-Levels, The Marlborough School Science Academy St Albans**

**Sep 2018 - Jun 2020**

- Received 4 A grades in subjects Physics, Mathematics, Computer science and Chemistry.

### Technical Experience & Skills

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#### **National Rocketry Competition, UK SEDS (Students for the Exploration and Development of Space) Bristol**

**Sep 2020 – Present**

- Designing and building a rocket and payload system to compete against others nationally for best payload integration and final altitude.
- Developed, built, and launched a small-scale fiberglass composite rocket with a 100g technical payload.
- Developed CAD models in Fusion 360 and AutoCAD for structural analysis and payload configuration.
- Tested a multitude of rocket systems including structural analysis and stability calculations.
- Coded computer vision software to give 3-d global position of an identified thermal IR source.
- Coded systems to track inertial measurement unit (IMU) data and produce a graph of trajectory over time.
- Produced 60+ pages of technical specification and review following the design and launch.
- Worked in a small team managing administrative duties and financials.

**EuRoC European Rocketry Competition****Sep 2021 – Present**

- European competition like the national rocketry competition but on a larger scale with teams form across Europe competing and launching from Portugal.
- Integral member of a founding Bristol EuRoC team with aims to develop a hybrid rocket for flight in 2023 with a technical payload of up to 1kg in mass.

**Space Research, Asteria Edinburgh****Sep 2020 - Jun 2021**

- University of Edinburgh satellite development team working in a research role.
- Developed computational model for the requirements of in-situ resource utilization on extraterrestrial bodies with a focus on hydroponic systems.
- Researched applications of hydroponics and analyzed their strengths and weakness.

**Game development****2016 - Present**

- Developed a plethora of game systems and code using the Unity engine and C#.
- Understanding of full stack software development in a practical environment.
- 3D modeling in blender and 2D sprite production in photoshop.

**Web Development****Present**

- Developed a portfolio website linked above to demonstrate my abilities and projects.
- Using GitHub to store and update changes.
- Coding using html and CSS to produce a visually appealing website.

**Previous Work**

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**Technician, Fix my Crack Bristol****2021 - Present**

- Trained in technology repairs with a focus on apple products and screen repairs.
- Knowledge of electronic systems and diagnostic and repair methods.
- Repaired a variety of devices and issues ensuring customer satisfaction and demonstrating a technological understanding.
- Working in a Bristol based team cooperating with other teams across the country to develop understanding and good practice for technical repairs and procedures.
- Coordinating directly with customers to provide the best possible service.

**Bookseller, Waterstones St. Albans****Jan 2018 - Sep 2020**

- Trained new employees in technical systems and logistical setups of store.
- Managed back of house with full responsibilities organising and running systems from delivery unpacking and distribution to fulfilling online orders and enquiries.
- Worked with colleagues to complete weekly and monthly banking, handling large sums of money, and completing administrative documentation.
- Teamwork, helping and working closely with my colleagues and partners as well as occasionally being place in charge of various projects and endeavors.